

Claims

1. (original) A fastener which includes:

(a) a fastening element having a beam, an engagement means located on one side of the beam, a base and a flex point separate from the beam; and

5 (b) actuating means attached to the fastening element and including a material adapted to contract when activated;

wherein the beam is movable, upon contraction of the material, between an engagement position and a disengagement position, and wherein the base has a first arm and a second arm joined by the flex point, the beam being located at one end of the first arm and the flex point being located on the same side of the beam as the engagement means.

2. (original) The fastener of claim 1, wherein the engagement means is located at or towards one end of the beam of the fastening element.

3. (original) The fastener of claim 2, wherein the engagement means includes a projecting wedge.

4. (original) The fastener of claim 1, wherein the material adapted to contract when activated is shape memory alloy wire.

5. (original) The fastener of claim 4, wherein the shape memory alloy wire is contained within one or more grooves in the beam.

6. (original) The fastener of claim 5, wherein the one or more grooves are located on one side of the beam and the engagement means is located on the opposite side of the beam.

7. (original) The fastener of claim 1, wherein the beam is integral with the base.

8. (original) The fastener of claim 1, wherein a bias means is located between the first and second arms.

9. (original) The fastener of claim 8, wherein the bias means is a leaf spring.

10. (original) The fastener of claim 1, which includes a microprocessor.

11. (original) The fastener of claim 10, wherein the microprocessor is adapted to control energy delivery to the material adapted to contract when activated.

- 12.(original) The fastener of claim 10, wherein the microprocessor is adapted to sense whether the engagement means is engaged or disengaged.
- 13.(original) The fastener of claim 10, wherein the microprocessor is adapted to control temperature of the material adapted to contract when activated.
- 5 14.(original) The fastener of claim 12, wherein the microprocessor is adapted to provide a report on whether the engagement means is engaged or disengaged.
- 15.(original) The fastening system of claim 14, wherein the microprocessor is adapted to provide the report to a network of which the fastener forms a part.
- 16.(cancelled)
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41.(cancelled)

42.(cancelled)

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44.(cancelled)

45.(cancelled)

46.(cancelled)

47.(original) A fastener assembly including:

15 (a) an engagement means including latch means and locking means, the engagement means being movable between a locking position and an unlocking position;

(b) biasing means urging the engagement means towards the locking position; and

20 (c) means for drawing the engagement means from the locking position to the unlocking position, the drawing means comprising or including material adapted to contract when activated.

48.(cancelled)

49.(cancelled)

50. (original) A fastening system including:

25 (a) first engagement means;

(b) second engagement means; and

(c) a locking element moveable between a locked position in which the first engagement means is maintained in engagement with the second engagement means and an unlocked position in which the first engagement means is free to disengage from the second engagement means;

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wherein the locking element is adapted to be moved to the unlocked position by means adapted to contract when activated, being different from the locking element.

51. (Cancelled)

10 52. (Cancelled)